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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

U.S. Appln No. 10/776,648 (Attorney's Docket No. DWNS.62631)	Filed: February 10, 2004 Confirmation No. 2005
Inventor: Huzeir Lekovic et al	Art Unit: 1711
TITLE: LOW DENSITY ACOUSTIC FOAMS BASED ON BIOPOLYMERS	Examiner: John M. Cooney

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY APPEAL BRIEF

Sir:

This is Appellants' Reply Brief in response to the Examiner's Answer dated November 21, 2008.

Beginning at page 3 of the Examiner's Answer, the Examiner maintains the rejection of claims 1-9, 19-25 and 48-54 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. More specifically, with respect to Appellants' insertion of limitation to a "non-biopolymer," the Examiner maintains such is not supported by the specification as originally filed. Appellants' maintain that the disclosure as originally filed discloses both biopolymers explicitly, and "non-biopolymers" by implication and therefore Appellants' claims meet the requirements of 35 U.S.C. §112.

Appellant respectfully requests The Board to take judicial notice of the fact that the term "biopolymer" means, to a person of ordinary skill in the art, a polymeric substance formed in a biological system or naturally occurring in nature. The Board's attention is respectfully directed

to the attached excerpt from Webster's Nine New Collegiate Dictionary, which defines a biopolymer as, "a polymeric substance (as a protein or polysaccharide) formed in a biological system." The Board's attention is also directed to the attached excerpt from Grant & Hackh's Chemical Dictionary, which defines biopolymer as "A naturally occurring macromolecule; as, produced by biosynthesis." Appellants' disclosure as originally filed disclosed and identifies biopolymers such as, but not limited to, castor oil, soy bean oil, and the like useful in making low density acoustic foams. These biopolymers are polymers that naturally occur in biosystems and are not man-made polymers. Appellants' specification as originally filed also discloses polymers that are made by man, including, but not limited, SPECFLEX NC 700 (Dow Chemical), VORANOL 391 (Dow Chemical), and JEFFOL A-480 (Huntsman Chemical), to name but a few examples. These man-made polymers do not naturally occur in a biological system and therefore are properly termed "non-biopolymers." Appellants' are entitled to amend the claims to include terminology that is not literally disclosed in the specification as filed but which is reasonably conveyed by the specification. Appellants are entitled to retreat or otherwise more clearly define terms in the claims provided that the specification reasonably conveys that Appellants were in possession of the claimed subject matter. Appellants, having disclosed man-made polymers which are not biopolymers, are entitled to amend the claims to use the term "non-biopolymer" in an effort to define the prior art.

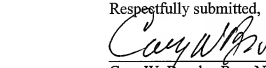
Furthermore, the Examiner's Answer does not maintain any of the other rejections under 35 U.S.C. §112 set forth in the Final Office Action. Therefore, Appellants maintain that the sole issue for The Board's review under 35 U.S.C. §112 is whether Appellants' specification reasonably convey that Appellants were in possession of an invention defined by the use of the

term "non-biopolymer" set forth in Appellants' claims. Appellants respectfully requests The Board reverse the Examiner's rejections under 35 U.S.C. §112.

Appellants maintain that, with all issues under 35 U.S.C. §112 being resolved in Appellants' favor, Appellants' claims define over the prior art for the reasons set forth in Appellants' Appeal Brief.

In view of the foregoing arguments, and those set forth in Appellants' Appeal Brief, Appellants respectfully requests The Board to reverse all of the rejections set forth in the Examiner's Answer.

Respectfully submitted,



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building)
)67) : a biological agent or condition
ecure laboratory conditions) that con-
environment; *also* : a hazard posed by

stra·man-'tā-shan, -,men-\ *n* (1962)
struments for recording and transmit-
astronauts in flight)
g·i·cal \-i-kəl\ *n* (1921) : a biological

1 : of or relating to biology or to life
or produced by applied biology — bi-

inherent timing mechanism that is in-
ems (as a cell) in order to explain vari-
ological processes
ction in numbers or elimination of pest
heir ecology (as by the introduction of

) : BIOCHEMICAL OXYGEN DEMAND
fare involving the use of living organ-
oxic products against men, animals, or
the use of synthetic chemicals harmful

1924) : preoccupation with biological
ocial situations — bi·ol·o·gis·tic \-,äl-ə-

ie, fr. *bi-* + *-logie* -logy] (1813) 1 : o
with living organisms and vital pro-
mal life of a region or environment b
sm or group; *broadly* : ECOLOGY — bi-

nes-ᵊn(t)s\ n [ISV] (1916) : the emis-
ns; *also* : the light so produced — bio-

: the amount of living matter (as in a
2 : plant materials and animal waste

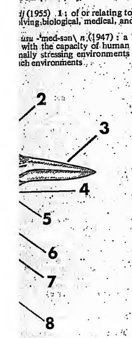
n (1966) : material used for or suitable
direct contact with living tissues
-iks, -math-'mat-\ *n pl but usu sing in*
special use in biology and medicine —
dj — bio·math·e·ma·ti·cian \-,math-

(1916) : a major ecological community

s\ *n pl but sing or pl in constr* (1933)
d esp. muscular activity (as in locomo-
i·cal \-i-kəl\ *adj* — bio·me·chan·i·cal·ly

ij (1955) 1 : of or relating to biomedi-
living biological, medical, and physical

usu -'med-sən\ *n* (1947) : a branch of
with the capacity of human beings to
nally stressing environments and with
ich environments



scapulars, *8* abdomen,
ix, *14* tail

bio·me·te·o·rol·o·gy \-,mēt-ē-ə-'räl-ə-jē\ *n* (1946) : a science that deals with the relationship between living beings and atmospheric phenomena

bio·met·rics \-'me-triks\ *n pl but sing or pl in constr* (1902) : BIOMETRY

bi·om·e·try \bī-'äm-ə-trē\ *n* [ISV] (1831) : the statistical analysis of biological observations and phenomena — bio·met·ric \,bī-ō-'me-trik\ *or* bio·met·ri·cal \-tri-kəl\ *adj* — bio·me·tri·cian \-me-'trish-ən\ *n*

bio·mor·phic \,bī-ō-'mȯr-fik\ *adj* (1895) : resembling or suggesting the forms of living organisms ⟨~ sculptures⟩ ⟨~ images⟩

bi·on·ic \bī-'än-ik\ *adj* (1973) 1 : of or relating to bionics 2 : having normal biological capability or performance enhanced by or as if by electronic or electromechanical devices

bi·on·ics \bī-'än-iks\ *n pl but sing or pl in constr* [²bi- + -onics (as in electronics)] (1960) : a science concerned with the application of data about the functioning of biological systems to the solution of engineering problems

bi·o·nom·ics \,bī-ə-'näm-iks\ *n pl but sing or pl in constr* [bionomic, adj., prob. fr. F *bionomique*, fr. *bionomie* ecology, fr. *bi-* + *-nomie* -nomy] (1888) : ECOLOGY — bi·o·nom·ic \-ik\ *adj* — bi·o·nom·i·cal \-i-kəl\ *adj*

-bi·ont \'bī-,änt\ *n comb form* [prob. fr. G, modif. of Gk *biount-*, *biōn*, prp. of *bioun* to live, fr. *bios* life] : one having a (specified) mode of life ⟨haplo*biont*⟩

bio·phys·ics \,bī-ō-'fiz-iks\ *n pl but sing or pl in constr* (1892) : a branch of science concerned with the application of physical principles and methods to biological problems — bio·phys·i·cal \-i-kəl\ *adj* — bio·phys·i·cist \-'fiz-(ə-)səst\ *n*

bio·poly·mer \,bī-ō-'päl-ə-mər\ *n* (1963) : a polymeric substance (as a protein or polysaccharide) formed in a biological system

bi·op·sy \'bī-,äp-sē\ *n, pl* -sies [ISV *bi-* + Gk *opsis* appearance — more at OPTIC] (1895) : the removal and examination of tissue, cells, or fluids from the living body

bio·rhythm \'bī-ō-,rith-əm\ *n* (1961) : an inherent rhythm that appears to control or initiate various biological processes — bio·rhyth·mic \-'rith-mik\ *adj*

bio·sat·el·lite \,bī-ō-'sat-ᵊl-,īt\ *n* (1957) : an artificial satellite for carrying a living human being, animal, or plant

bio·sci·ence \-'sī-ən(t)s\ *n* (1941) : BIOLOGY 1; *also* : LIFE SCIENCE — bio·sci·en·tif·ic \-,sī-ən-'tif-ik\ *adj* — bio·sci·en·tist \-'sī-ənt-əst\ *n*

-bi·o·sis \(,)bī-'ō-səs, bē-\ *n comb form, pl* -bi·o·ses \-,sēz\ [NL, fr. Gk *biōsis*, fr. *bioun* to live, fr. *bios*] : mode of life ⟨para*biosis*⟩

bio·so·cial \,bī-ō-'sō-shəl\ *adj* (1897) : of, relating to, or concerned with the interaction of the biological aspects and social relationships of living organisms — bio·so·cial·ly \-'sōsh-(ə-)lē\ *adv*

bio·sphere \'bī-ə-,sfi(ə)r\ *n* (1899) 1 : the part of the world in which life can exist 2 : living beings together with their environment — bio·spher·ic \,bī-ə-'sfi(ə)r-ik, -'sfer-\ *adj*

bio·sta·tis·tics \,bī-ō-stə-'tis-tiks\ *n pl but sing in constr* (1950) : statistical processes and methods applied to the analysis of biological data — bio·sta·tis·ti·cal \-ti-kəl\ *adj* — bio·stat·is·ti·cian \-,stat-ə-'stish-ən\ *n*

bio·strati·graph·ic \-,strat-ə-'graf-ik\ *adj* (1947) : of or relating to the branch of paleontology dealing with the conditions and order of deposition of sedimentary rocks — bio·stra·tig·ra·phy \-strə-'tig-rə-fē\ *n*

bio·syn·the·sis \-'sin(t)-thə-səs\ *n* [NL] (1930) : the production of a chemical compound by a living organism — bio·syn·thet·ic \-sin-'thet-ik\ *adj* — bio·syn·thet·i·cal·ly \-i-k(ə-)lē\ *adv*

bio·sys·te·mat·ics \-,sis-tə-'mat-iks\ *n pl but sing or pl in constr* (1945) : experimental taxonomy esp. as based on cytogenetics — bio·sys·te·mat·ic \-ik\ *adj* — bio·sys·tem·atist \-'sis-tə-mət-əst, -sis-'tem-ət-\ *n*

bi·o·ta \bī-'ōt-ə\ *n* [NL, fr. Gk *biotē* life; akin to Gk *bios*] (ca. 1901) : the flora and fauna of a region

bio·tech·nol·o·gy \,bī-ō-tek-'näl-ə-jē\ *n* (1941) 1 : applied biological science (as bioengineering or recombinant DNA technology) 2 : ERGONOMICS — bio·tech·no·log·i·cal \-,tek-nə-'läj-i-kəl\ *adj*

bio·te·lem·e·try \-tə-'lem-ə-trē\ *n* (1963) : the remote detection and measurement of a condition, activity, or function relating to a man or animal — bio·tel·e·met·ric \-,tel-ə-'me-trik\ *adj*

bi·ot·ic \bī-'ät-ik\ *adj* [Gk *biōtikos*, fr. *bioun*] (1868) : of or relating to life; *esp* : caused or produced by living beings

-bi·ot·ic \(,)bī-'ät-ik, bē-\ *adj comb form* [prob. fr. NL *-bioticus*, fr. Gk *biōtikos*] : having a (specified) mode of life ⟨endo*biotic*⟩

biotic potential *n* (1935) : the inherent capacity of an organism or species to reproduce and survive

bi·o·tin \'bī-ə-tən\ *n* [ISV, fr. Gk *biotos* life, sustenance; akin to Gk *bios*] (1936) : a colorless crystalline growth vitamin $C_{10}H_{16}N_2O_3S$ of the vitamin B complex found esp. in yeast, liver, and egg yolk

bi·o·tite \'bī-ə-,tīt\ *n* [G *biotit*, fr. Jean B. *Biot* †1862 Fr. mathematician] (1862) : a generally black or dark green form of mica $K_2(Mg,Fe,Al)_6(Si,Al)_8O_{20}(OH)_4$ forming a constituent of crystalline rocks and consisting of a silicate of iron, magnesium, potassium, and aluminum — bi·o·tit·ic \,bī-ə-'tit-ik\ *adj*

bio·tope \'bī-ə-,tōp\ *n* [²bi- + Gk *topos* place — more at TOPIC] (1927) : a region uniform in environmental conditions and in its populations of animals and plants for which it is the habitat

bio·trans·for·ma·tion \'bī-ō-,tran(t)s-fər-'mā-shən, -,fȯr-\ *n* (1955) : the transformation of chemical compounds within a living system

bio·type \-,tīp\ *n* [ISV] (1906) : the organisms sharing a specified genotype; *also* : the genotype shared or its distinguishing peculiarity — bio·typ·ic \,bī-ə-'tip-ik\ *adj*

bi·pa·ren·tal \,bī-pə-'rent-ᵊl\ *adj* (1900) : of, relating to, involving, or derived from two parents — bi·pa·ren·tal·ly \-ᵊl-ē\ *adv*

bi·par·ti·san \(')bī-'pärt-ə-zən, -sən, -,zan, *chiefly Brit* ,bī-,pärt-ə-'zan\ *adj* (ca. 1909) : of, relating to, or involving members of two parties ⟨a ~ commission⟩ — bi·par·ti·san·ism \-zə-,niz-əm, -sə-\ *n* — bi·par·ti·san·ship \-zən-,ship, -sən-\ *n*

bi·par·tite \(')bī-'pär-,tīt\ *adj* [L *bipartitus*, pp. of *bipartire* to divide in two, fr. *bi-* + *partire* to divide, fr. *part-*, *pars* part] (1574) 1 a : being in two parts b : having two correspondent parts one for each party ⟨a ~ contract⟩ c : shared by two ⟨a ~ treaty⟩ 2 : divided into two parts almost to the base ⟨a ~ leaf⟩ — bi·par·tite·ly *adv* — bi·par·ti·tion \,bī-(,)pär-'tish-ən\ *n*

bi·ped \'bī-,ped\ *n* [L *biped-*, *bipes*, fr. *bi-* + *ped-*, *pes* foot — more at FOOT] (1646) : a two-footed animal — bi·ped·al \(')bī-'ped-ᵊl\ *adj*

bi·ped·al·ism \(')bī-'ped-ᵊl-,iz-əm\ *n* (1907) : the condition of having two feet or of using only two feet for locomotion

bi·phe·nyl \(')bī-'fen-ᵊl, -'fēn-\ *n* [ISV] (1922) : a white crystalline hydrocarbon $C_6H_5·C_6H_5$ used esp. as a heat-transfer medium

bi·pin·nate \-'pin-,āt\ *adj* (1794) : twice pinnate — bi·pin·nate·ly *adv*

bi·plane \'bī-,plān\ *n* (1874) : an airplane with two main supporting surfaces usu. placed one above the other

bi·pod \'bī-,päd\ *n* [*bi-* + *-pod* (as in *tripod*)] (1922) : a two-legged support

bi·po·lar \(')bī-'pō-lər\ *adj* (1810) 1 : having or marked by two mutually repellent forces or diametrically opposed natures or views 2 : having or involving the use of two poles 3 : relating to, associated with, or occurring in both polar regions ⟨~ species of birds⟩ — bi·po·lar·i·ty \,bī-pō-'lar-ət-ē\ *n* — bi·po·lar·iza·tion \(,)bī-,pō-lə-rə-'zā-shən\ *n* — bi·po·lar·ize \(')bī-'pō-lə-,rīz\ *vt*

bi·pro·pel·lant \,bī-prə-'pel-ənt\ *n* (1947) : a rocket propellant consisting of separate fuel and oxidizer that come together only in a combustion chamber

bi·qua·drat·ic \,bī-kwä-'drat-ik\ *adj or n* (1668) : QUARTIC

bi·ra·cial \(')bī-'rā-shəl\ *adj* (1922) : of, relating to, or involving members of two races — bi·ra·cial·ism \-shə-,liz-əm\ *n*

bi·ra·di·al \(')bī-'rād-ē-əl\ *adj* (ca. 1909) : having both bilateral and radial symmetry

bi·ra·mous \(')bī-'rā-məs\ *adj* (1877) : having two branches

¹birch \'bərch\ *n* [ME, fr. OE *beorc*; akin to OHG *birka* birch, L *fraxinus* ash tree, OE *beorht* bright — more at BRIGHT] (bef. 12c) 1 : any of a genus (*Betula* of the family Betulaceae, the birch family) of monoecious deciduous usu. short-lived trees or shrubs having simple petioled leaves and typically a layered membranous outer bark that peels readily 2 : the hard pale close-grained wood of a birch 3 : a birch rod or bundle of twigs for flogging — birch *or* birch·en \'bər-chən\ *adj*

²birch *vt* (1830) : to beat with or as if with a birch : WHIP

birch·bark \'bərch-,bärk\ *n* (1868) : a canoe made of birch bark

Birch·er \'bər-chər\ *n* (1961) : a member or adherent of the John Birch Society — Birch·ism \'bər-,chiz-əm\ *n* — Birch·ist \-chəst\ *or* Birch·ite \-,chīt\ *n or adj*

¹bird \'bərd\ *n, often attrib* [ME, fr. OE *bridd*] (bef. 12c) 1 *archaic* : the young of a feathered vertebrate 2 : any of a class (Aves) of warm-blooded vertebrates distinguished by having the body more or less completely covered with feathers and the forelimbs modified as wings 3 : a game bird 4 : CLAY PIGEON 5 a : FELLOW; *esp* : a peculiar person b *chiefly Brit* : GIRL 6 : SHUTTLECOCK 7 a : a hissing or jeering expressive of disapproval b : dismissal from employment 8 : something (as an aircraft, rocket, or satellite) resembling a bird esp. by flying or being aloft 9 : an obscene gesture of contempt made by pointing the middle finger upward while keeping the other fingers down — usu. used with *the*; called also *finger* — bird·like \-,līk\ *adj* — for the birds : WORTHLESS, RIDICULOUS

²bird *vi* (1918) : to observe or identify wild birds in their natural environment

bird·bath \'bərd-,bath, -,bàth\ *n* (1895) : a usu. ornamental basin set up for birds to bathe in

bird·brain \-,brān\ *n* (1943) 1 : a stupid person 2 : SCATTERBRAIN — bird·brained \-,brānd\ *adj*

bird·call \-,kȯl\ *n* (1625) 1 : a device for imitating the cry of a bird 2 : the note or cry of a bird; *also* : a sound imitative of it

bird colonel *n* [fr. the eagle serving as insignia for this rank] *slang* (ca. 1947) : COLONEL 1a

bird–dog \'bərd-,dȯg\ *vi* (1943) : to watch closely ~ *vt* : to seek out : FOLLOW, DETECT

bird dog *n* (1888) 1 : a gundog trained to hunt or retrieve birds 2 *n* : one (as a canvasser or talent scout) who seeks out something for another b : one who steals another's date

bird–dog·ging *n* (ca. 1944) 1 : the stealing of another's date (as at a party) 2 : the action of one that bird-dogs

bird·er \'bərd-ər\ *n* (15c) 1 : a catcher or hunter of birds esp. for market 2 : a person who birds

bird·house \'bərd-,haùs\ *n* (1870) : an artificial nesting site for birds; *also* : AVIARY

¹bird·ie \'bərd-ē\ *n* (1792) 1 : a little bird 2 : a golf score of one stroke less than par on a hole — compare EAGLE

²birdie *vt* bird·ied; bird·ie·ing (1948) : to shoot in one stroke under par

bird·lime \'bərd-,līm\ *n* (15c) 1 : a sticky substance usu. made from the bark of a holly (*Ilex aquifolium*) that is smeared on twigs to snare small birds 2 : something that ensnares — birdlime *vt*

bird louse *n* (1826) : BITING LOUSE

bird·man \'bərd-mən, *esp for 1 also* -,man\ *n* (1697) 1 : one who deals with birds 2 : a person (as an aviator, helicopter pilot, or hang glider operator) resembling a bird esp. by flying or being aloft

bird of paradise (1638) : any of numerous brilliantly colored plumed oscine birds (family Paradiseidae) of the New Guinea area

bird of passage (1732) 1 : a person who leads a wandering or unsettled life 2 : a migratory bird

bird of prey (14c) : a carnivorous bird (as a hawk, falcon, or vulture) that feeds wholly or chiefly on carrion or on meat taken by hunting

bird pepper *n* (ca. 1696) : a capsicum (*Capsicum frutescens*) having very small oblong extremely pungent red fruits

bird·seed \'bərd-,sēd\ *n* (1840) : a mixture of seeds (as of hemp, millet, and sunflowers) used for feeding caged and wild birds

¹bird's–eye \'bərd-,zī\ *n* (1597) 1 : any of numerous plants with small bright-colored flowers; *esp* : a speedwell (*Veronica chamaedrys*) 2 a : an allover pattern for textiles consisting of a small diamond with a center dot b : a fabric woven with this pattern 3 : a small spot in wood surrounded with an ellipse of concentric fibers

²bird's–eye *adj* (1665) 1 : marked with spots resembling birds' eyes 2 a : seen from above as if by a flying bird ⟨a ~ view⟩ b : CURSORY 3 : of or relating to wood (as maple) containing bird's-eyes

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\ə\ abut \ᵊ\ kitten, F table \ər\ further \a\ ash \ā\ ace \ä\ cot, cart \aù\ out \ch\ chin \e\ bet \ē\ easy \g\ go \i\ hit \ī\ ice \j\ job \ŋ\ sing \ō\ go \ȯ\ law \ȯi\ boy \th\ thin \t͟h\ the \ü\ loot \ù\ foot \y\ yet \zh\ vision \à, k, ⁿ, œ, ᵫ, ue, ᵫe, ʸ\ *see* Guide to Pronunciation

GRANT & HACKH'S

CHEMICAL DICTIONARY

[*American, International, European and British Usage*]

Containing the Words Generally Used in Chemistry, and Many of the Terms Used in the Related Sciences of Physics, Medicine, Engineering, Biology, Pharmacy, Astrophysics, Agriculture, Mineralogy, etc.

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TABLE 15. BIOLOGY-RELATED SCIENCES

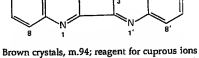
Energy transformation		Biophysics
Matter changes		Biochemistry
Morphology	Cells	Cytology
	Tissues	Histology
	Organs	Anatomy
	Organisms	Taxonomy
Physiology	Generative	Embryology
	Sustentative	Metabolism
	Correlative	Circulation and nerves
Pathology	Plants	Phytopathology
	Animals	Zoopathology
	Man	Pathology
Etiology	The race	Phylogeny
	The individual	Ontogeny
Chorology	Plants	Flora
	Animals	Fauna
	Plants and animals	Ecology
Paleontology	Plants	Paleobotany
	Animals	Paleozoology
	Man	Ethnology

biometry The application of statistics to biological science.
biomolecule A molecule of protoplasm; a unit of living substance. Cf. *idioblast, protoplasm.*
bionomy The measurement of life phenomena.
bio-osmosis The osmotic pressure of living cells.
biophage A cell or organism feeding on living cells or organisms.
biophore Biomone. The smallest particle of living matter, consisting of protoplasm.
bioplasm Protoplasm.
bioplast Micelle.
biopolymer A naturally occurring macromolecule; as, produced by biosynthesis.
biorization Pasteurization at 100–300 kPa.
bios $C_5H_{11}O_2N$ = 133.1. A crystalline substance similar in character to a vitamin, which was found to be essential for the growth of certain types of yeast, m.223. Now known to consist principally of nicotinic acid and panthothenic acid.
biose A carbohydrate containing 2 carbon atoms, e.g., $HO{\cdot}CH_2{\cdot}CHO$. Cf. *tetrose, hexose.*
biosphere The air, land, sea, and water immediately surrounding mankind.
biosterin Biosterol.
biosterol $C_{27}H_{44}O_2$ = 340.7. An alcohol resembling cholesterol.
biota The flora and fauna of a region.
biotechnology The application of living organisms, or their biological systems or processes, to the manufacture of useful products; e.g., *genetic engineering*, q.v., single-cell *protein*, q.v., biogas, q.v., drugs (as, insulin) and chemicals from biomass.
biotic Pertaining to life or living organisms.
biotin* $C_{10}H_{16}O_3N_2S$ = 244.3. A member of the vitamin B complex. Yeasts and bacteria contain or make b. Deficiency occurs only if diet consists largely of raw eggs; their white contains an antivitamin, avidin. B. is a coenzyme for carboxylases. See *vitamins*, Table 101 on p. 622.

biotite A brown-black ferrous mica.
biotoxin A toxin formed in the tissues of the living body.
bioxalate Hydrogen*oxalate**.
bioxyl Bismuthyl chloride.
biozeolite A zeolitic biological slime from sewage filters.
biperiden $C_{21}H_{29}ON$ = 311.5. Akineton. White crystals, insoluble in water; used to treat Parkinson's disease (USP, BP).
biphenyl (1)* ($C_6H_5)_2$ = 154.2. Phenylbenzene. Colorless scales, m.71, insoluble in water. (2) The biphenylyl* radical.
amino ~ $PhC_6H_4{\cdot}NH_2$ = 169.2. *ortho- ~* Biphenylyl amine. Colorless crystals, m.45. *para- ~* Xenyl amine, *p*-phenylaniline, martylamine. White leaflets, m.53.
diamino ~ $NH_2C_6H_4{\cdot}C_6H_4NH_2$ = 184.2. 2,2'- ~ Colorless crystals, m.81. 4,4'- ~ Benzidine*. dimethyl ~ Ditolyl*.
methyl ~ $Ph{\cdot}C_6H_4{\cdot}Me$ = 168.2. Phenyl tolyl. *meta- ~* Colorless liquid, b.275. *para- ~* Colorless liquid, b.265.
biphenylene (1)* The hypothetical compound $C_6H_4{:}C_6H_4$. (2) The radical $-C_6H_4{\cdot}C_6H_4-$. b.bisazo The radical $-N{:}NC_6H_3{\cdot}C_6H_4N{:}N-$. b. oxide Diphenylenefuran.
biphenylyl* [1,1'-Biphenylyl], biphenyl, diphenyl; xenyl (*para* only). The radical $C_6H_5{\cdot}C_6H_4-$, from biphenyl.
b.amine Amino*biphenyl*. b.diamine 2,2'- ~ Diamino*biphenyl*. 4,4'- ~ Benzidine*. b.imide Carbazole*.
b.mercury $(PhC_6H_4)_2Hg$ = 507.0. White scales, m.216.
BIPP A mixture of bismuth, iodoform, and paraffin; an antiseptic paste for infected wounds.
bipropargyl 1,5-Hexadiyne*.
bipropenyl 2,4-Hexadiene*.
bipseudoindoxyl Indigo.
bipyridyl* $NH_4C_5{\cdot}C_5H_4N$ = 156.2. Dipyridyl, bipyridine†.

	m.	b.	Water solubility
2,2'-	70	272	Slight
2,3'-	liquid	288	Insoluble
2,4'-	62	281	Slight
3,3'-	68	291	Very soluble
3,4'-	61	297	Very soluble
4,4'-	114	305	Hot only

biquinoline* $C_{18}H_{13}N_2$ = 256.3. Diquinoline. 2,2'- ~ Crystals, m.196. 2,3- ~ Yellow crystals, m.176. 6,6'- ~ Crystals, m.181.
biquinolyl* $C_{18}H_{12}N_2$ = 256.3. Diquinolyl, biquinoline. 2,2'- ~ m.196:



8,8'- ~ Brown crystals, m.94; reagent for cuprous ions (purple complex soluble in many solvents; sensitivity 0.2 ppm).
birch A tree of the genus Betula. b. camphor Betulinol. b. oil Sweet b. oil, betula oil. The essential oil from the bark of *Betula lenta*, black birch. Colorless oil, d.1.127–1.182, b.218–222 (chief constituent is methylsalicylate); a flavoring and liniment. b.-tar oil A tarry oil from the wood of *Betula alba*, white birch. Brown oil with empyreumatic odor, d.0.886–0.950, soluble in alcohol (chief constituents phenols and cresols). Used in ointments and in leather dressing. b.wood **carbon** Norit.